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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/645,595

08/22/2003

Megumi Takemoto

025260-091

9467

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7590

06/09/2006

BUCHANAN INGERSOLL PC  
(INCLUDING BURNS, DOANE, SWECKER & MATHIS)  
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EXAMINER

NGUYEN, VINH P

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 06/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H/A

**Office Action Summary**

Application No.

10/645,595

Applicant(s)

TAKEMOTO ET AL.

Examiner

VINH P. NGUYEN

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/13/06 and 05/26/06 has been entered.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verkuil (Pat #5,500,607) in view of Kusumoto et al (Jp # 08-166407)

As to claims 9-10 and , Verkuil discloses a probe (10) as shown in figures 1-2 for making contact with the semiconductor device (14,16) having a side surface and a tip portion defining a spherical surface with a radius of curvature on the order of 12.5  $\mu\text{m}$ . (see column 3, lines 34-38). It is noted that the areas on the semiconductor device (14,16), in which the probe tip makes contact, are considered as electrode pads. It appears that the probe tip portion generating a shear deformation on the pads as shown in figures 2 and 4.

Verkuil does not mention about the surface roughness of the tip portion of said probe is equal to or less than 0.4  $\mu\text{m}$ .

Kusumoto et al teach that it would have been well known to have the maximum roughness of the curved surface at 2Um or less.

It would have been obvious for one of ordinary skill in the art to have the surface roughness of the tip portion of said probe is equal to or less than 0.4 U as taught by Kusumoto et al so that the attachment of the oxide to the probe tip can be prevented and therefore the stable conduction can be continuously maintained.

As to claims 11-12, Verkuil does not mention about having his probe on a probe card.

However, Kusumoto teach that it would have been well known to put the probe on a probe card,

It would have been well known for one of ordinary skill in the art to put the probe of Verkuil on the probe card so that the plurality of probes for making contact with a plurality of test pads of the semiconductor device (14,16).

4. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makekawa et al (Pat #6,646,455) in view of Kusumoto et al (Jp # 08-166407).

As to claims 9-10, Makekawa et al disclose a test probe (1) as shown in figure 1 having a tip portion making contact with test pads (2) of a semiconductor device wherein the test probe having a side surface portion and a tip portion defining a spherical surface and said spherical surface having a radius of curvature about 13UM which is within the specified range between 10Um and 20Um.

Makekawa et al does not mention about the surface roughness of the tip portion of said probe is equal to or less than 0.4  $\mu\text{m}$ .

Kusumoto et al teach that it would have been well known to have the maximum roughness of the curved surface at 2 $\mu\text{m}$  or less. It is noted that the range 2 $\mu\text{m}$  or less would cover the range of equal or less than 0.4 $\mu\text{m}$ .

It would have been obvious for one of ordinary skill in the art to have the surface roughness of the tip portion of said probe is equal to or less than 0.4  $\mu\text{m}$  as taught by Kusumoto et al so that the attachment of the oxide to the probe tip can be prevented and therefore the stable conduction can be continuously maintained.

As to claims 11-12, it appears that the probe (1) of Makekawa et al in view of Kusumoto et al is connected to a probe card (see column 9, lines 59-67), therefore this probe card would include a plurality of probes for making contact with test pads (2) of the semiconductor device.

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g.,

In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

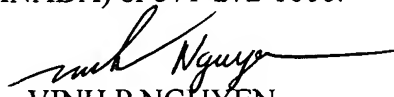
6. Claims 9-12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of copending Application No.11/206,167. Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitations of the claims 1-6 encompass the limitations of claims 9-12.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH P. NGUYEN whose telephone number is 571-272-1964. The examiner can normally be reached on 6:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HA T. NGUYEN can be reached on 571-272-1678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
VINH P NGUYEN  
Primary Examiner  
Art Unit 2829  
06/02/06